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Special Provision for Material Transfer Device

January 12, 2001

This special provision was originally developed by the Bureau of Materials and Physical Research. The revision to this special provision reflects a change in the minimum surge capacity of the material transfer device. This memorandum and special provision replaces the June 24, 1999 memorandum from Eric Harm (by Richard Hahn) and the April 1,2000 memorandum from William Sunley both of which transmitted a special provision concerning the use of a Material Transfer Device.

The special provision contains three (3) fill in the blank areas which must be determined by the district and are considered project specific requirements. The following guidelines should be considered:

(1) Type of materials to be placed with the Material Transfer Device (to be determined by the district). Example wording: This work shall consist of placing bituminous concrete binder and surface course mixtures according to Section 406 of the Standard Specifications, except that these materials shall be placed using a material transfer device.

(2) Location where Material Transfer Device will be used on project (to be determined by the district). Example wording: The material transfer device shall be used for the placement of all bituminous concrete binder and surface course mixtures placed with a bituminous paver including ramps but excluding shoulders.

(3) Based on (1) above, the designer must restate which materials are placed with the Material Transfer Device (to be determined by the district). If square yard pay items are placed with the Material Transfer Device, conversion factors must be shown on the plans. Example wording: This work will be measured for payment in metric tons (tons) for all bituminous concrete binder and surface course materials placed with a Material Transfer Device.

The operation or transportation of heavy equipment on pavement or structures within contract limits is governed by Article 107.16 of the Standard Specifications and implemented through Construction Memorandum No. 95-39. The special provision contains specific restrictions regarding travel on bridges and full depth pavements. In addition, the designer shall submit information to the Bureau of Bridges and Structures identifying the structures that will be crossed by the Material Transfer Device. The Bureau of Bridges

and Structures will analyze the structures to verify that they have the capacity to safely carry an emptied MTD and will provide the designer with recommendations. The recommendations provided by the Bureau of Bridges and Structures will identify any structure, which due to general deterioration or insufficient load carrying capacity, can not be crossed by an emptied MTD. The plans shall include notice to the Contractor of special requirements and restrictions for structures that cannot be crossed by an emptied MTD. The notice shall indicate to the Contractor that the emptied MTD must be transported over the identified structures on a transport vehicle and that information describing axle loads and axle spacing of the transport vehicle must be provided to the Engineer for review by the Bureau of Bridges and Structures.

The districts should include the BDE Check Sheet with the applicable BDE Special Provisions marked for the April 27, 2001 letting and for subsequent lettings. The Project Development and Implementation Section will include the paper copy in the contract.

This special provision will be transferred through the E-mail System to the district offices on January 12, 2000.

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MATERIAL TRANSFER DEVICE (BDE)

Effective Date: June 15, 1999
Revised Date: March 1, 2001

Description. This work shall consist of placing (1), except that these materials shall be placed using a material transfer device.

Materials and Equipment. The Material Transfer Device shall have a minimum surge capacity of 13.5 metric tons (15 tons), shall be self-propelled and capable of moving independent of the paver, and shall be equipped with the following:

(a) Front-Dump Hopper and Conveyor. The conveyor shall provide a positive restraint along the sides of the conveyor to prevent material spillage.

(b) Paver Hopper Insert. The paver hopper insert shall have a minimum capacity of 12.7 metric tons (14 tons).

(c) Mixer/Agitator Mechanism. This re-mixing mechanism shall consist of a segmented, anti-segregation, re-mixing auger or two full-length longitudinal paddle mixers designed for the purpose of re-mixing the bituminous material. The longitudinal paddle mixers shall be located in the paver hopper insert.

Construction Requirements. The material transfer device shall be used for the placement of (2). The material transfer device speed shall be adjusted to the speed of the paver to maintain a continuous, non-stop paving operation.

The material transfer device will be permitted on partially completed segments of full-depth bituminous concrete pavement if the thickness of binder in place is 250 mm (10 in.) or greater.

Structures**.** The Material Transfer Device may be allowed to travel over structures under the following conditions:

(a) Approval will be given by the Engineer.

(b) The vehicle shall be emptied of bituminous material prior to crossing the structure and shall travel at crawl speed across the structure.

(c) The tires of the vehicle shall travel on or in close proximity and parallel to the beam and/or girder lines of the structure.

Method of Measurement. This work will be measured for payment in metric tons (tons) for (3) materials placed with a material transfer device.

Basis of Payment. This work will be paid for at the contract unit price per metric ton (ton) for MATERIAL TRANSFER DEVICE.

The various bituminous mixtures placed with the material transfer device will be paid for as specified in their respective specifications. The Contractor may choose to use the material transfer device for other applications on this project; however, no additional compensation will be allowed.

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